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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,846	01/08/2002	Moti Haimovsky	37360	4483
26327	7590	06/19/2006	EXAMINER	
THE LAW OFFICE OF KIRK D. WILLIAMS PO BOX 61538 DENVER, CO 80206-8538			CHEN, TSE W	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 06/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/042,846	HAIMOVSKY ET AL.
	Examiner	Art Unit
	Tse Chen	2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 30 May 2006.

2a) This action is FINAL.                    2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 8,13,31-33 and 35-51 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 8,13,31-33 and 35-51 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 30 May 2006 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated May 30, 2006.
2. Claims 8, 13, 31-33 and 35-51 are presented for examination.

### *Response to Amendment*

3. The amendment filed May 30, 2006 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The paragraph starting on page 11, line 1 of the original disclosure defines computer readable medium as including “other storage and signaling mechanisms including interfaces and devices such as network interface cards and buffers therein, as well as any communications devices...” The amendment filed May 30, 2006 introduces new matter by deleting “other storage and signaling mechanisms including interfaces and devices such as network interface cards and buffers therein, as well as any communications devices...” from the disclosure in regards to computer readable medium.

Applicant is required to cancel the new matter in the reply to this Office Action.

### *Drawings*

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the programmable interface as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).
5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “programmable interface”;

Art Unit: 2116

“interrogating the slave system to identify the [type or version] of the slave system”; “translating an original boot address to a remote boot address for accessing a remote boot image”; and “original boot address refers to a location in the boot ROM for retrieving a locally stored boot image within the first slave system” must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 2116

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8, 31-32, 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haigh et al., US Publication 20020087854, hereinafter Haigh, in view of Haisraeli, US Publication 20040015846, Rahman et al., US Patent 5539890, hereinafter Rahman, Jeffries, US Patent 5636342, and Getting Started Microsoft Windows 98, hereinafter Microsoft.

8. Haigh discloses an apparatus [fig. 1-3] comprising:

- A master system [sbc 302] including a master memory [e.g., 224] and a storage mechanism [disk 301] for storing a first remote boot image and a second remote boot image [pt.0022—23, 0033-34; disk portions store associated sbc images].
- A first slave system [sbc 303] including a first memory [e.g., 212] and a first programmable interface [bmi 230/320 and associated circuitries/units] coupled to the master system, the first programmable interface including a first system controller [218] [pt.0025, 0034].
- A second slave system [sbc 304] including a second memory [e.g., 212] and a second programmable interface [bmi 320 and associated circuitries/units] coupled to the master system, the second programmable interface including a second system controller [218] [pt.0025, 0034].
- Wherein the master system is configured to perform one or more operations to identify the first slave system and the second slave system after the master system is booted and the first and second slave system controllers are released [218 are released to freely process commands]; wherein the master system is configured to determine that the first remote boot image should be used for the first slave system and to cause the first slave

system to retrieve the first remote boot image and to boot from said retrieved first remote boot image; and wherein the master system is configured to determine that the second remote boot image should be used for the second slave system and to cause the second slave system to retrieve the second remote boot image and to boot from said retrieved second remote boot image [0015, 0026, 0029-30, 0033-36; 222 uses the parameters to identify the slaves and partition the disk accordingly to store associated sbc images; OS loader from master system causes slaves to access the appropriate OS].

9. Haigh did not disclose explicitly releasing the system controllers by the master system and did not discuss the details of retrieving the different remote boot images and identifying the slaves.

10. Haisraeli discloses an apparatus [fig.15] wherein first and second system controllers [slaves 302] are released [release\_sync command] by the master system [300] [pt.0307; table 7].

11. It would have been obvious to one of ordinary skill in the art, having the teachings of Haisraeli and Haigh before him at the time the invention was made, to modify the apparatus taught by Haigh to include the teachings of Hairaeli, as the releasing of slave systems by a master system is very well known in the art. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to test hierarchical systems such as Haigh's [Hairaeli: pt.0002, 0283; table 7; testing requires synchronized release between master and slave].

12. Rahman discloses an apparatus [processor system 10] comprising:

- A master system [microprocessor 12(0), maintenance diagnostic chip 14, and other associated circuitries/units such as memory 22] including a storage mechanism [memory

22, memory interface chip 20, and other associated circuitries/units] for storing a remote boot image [fig.1; col.10, ll.17-41].

- Wherein the master system is configured to update a programmable interface to retrieve the remote boot image [col.9, 1.36 – col.10, 1.41; mdc 14 updates register 220 in pic 16 to indicate where to retrieve boot image].

13. It would have been obvious to one of ordinary skill in the art, having the teachings of Rahman and Haigh before him at the time the invention was made, to modify the apparatus taught by Haigh to include the system controller taught by Rahman, in order to obtain the apparatus comprising the master system configured to update the first/second programmable interface to cause the first/second slave system to retrieve the first/second remote boot image [parameter of Haigh's 214 can be updated appropriately as is well known in the art]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to reduce overhead and maintenance in a network system [Haigh: pt.0003-0016].

14. Jeffries discloses a master system [smb master] configured to perform one or more operations [get identity] to identify one or more characteristics [nature, revision] of a slave system [smb slave] after the master system is booted [boot in order to operate], said operations including interrogating the slave system to identify its respective said characteristics [col.7, ll.39-61; col.8, ll.34-47].

15. It would have been obvious to one of ordinary skill in the art, having the teachings of Jeffries and Haigh before him at the time the invention was made, to modify the master system taught by Haigh to include the teachings of Jeffries, in order to automatically assign addresses to slaves in a system [Jeffries: col.2, ll.5-22]. One of ordinary skill in the art would have been

motivated to make such a combination as it provides a way to automatically assign addresses to slaves in a system without requiring the user to manually or programmatically set physical or logical switches.

16. Microsoft discloses determining a boot image [Windows 98] based on one or more characteristics [486dx] [pg.23, Before You Begin].

17. It would have been obvious to one of ordinary skill in the art, having the teachings of Microsoft, Jeffries and Haigh before him at the time the invention was made, to modify the master system taught by Haigh and Jeffries to include the teachings of Microsoft, in order to obtain the apparatus comprising the master system configured to determine that the first/second remote image should be used for the first/second slave system in response to the interrogation of the first/second slave system based on the identified characteristics of the first/second slave system. One of ordinary skill in the art would have been motivated to make such a combination as it provides a very well known way to conform with minimum system requirements and ensure that a system can operate effectively [Microsoft: pg.23, Before You Begin].

18. As to claim 31, Jeffries discloses, wherein said one or more characteristics include its type [nature] [col.8, ll.34-47].

19. As to claims 32 and 35, Jeffries discloses, wherein said one or more characteristics include its version [revision] [col.8, ll.34-47].

20. As to claim 36, Haigh discloses, wherein the master system is coupled to the first and second slave systems via a single bus [320] [0034].

21. As to claim 37, Haigh discloses, wherein said first programmable interface is configured to modify an original boot address to a remote boot address for accessing the first remote boot

image [0025]. Examiner has taken Official Notice that it is well known in the art to translate [in lieu of modify] a boot address to another boot address in order to access an alternate boot address.

22. As to claim 38, Haigh discloses, wherein the first slave system includes a boot disk [conventionally], and wherein the original boot address [parameter] refers to a location in the boot disk for retrieving a locally stored boot image within the first slave system [0025]. Examiner has taken Official Notice that it is well known in the art to store boot images in a ROM disk in order to prevent unintended modifications.

23. Claims 13, 33, 39-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haigh, in view of Rahman, Jeffries, and Microsoft as applied to claim 8 above.

24. In re claims 13, 39, 45, Haigh, Rahman, Jeffries, and Microsoft disclose the apparatus [sans limitation of release by the master system]; therefore, Haigh, Rahman, Jeffries, and Microsoft disclose the method and means thereof for operating the apparatus.

25. As to claims 33, 42-44, 49-51, Jeffries discloses, wherein said one or more characteristics include its type [nature] or version [revision] [col.8, ll.34-47].

26. As to claims 40, 46 and 48, Haigh, Rahman, Jeffries, and Microsoft disclose the method and means of programming thereof as discussed above in reference to claims 13, 45 and 37.

27. As to claims 41 and 47, Haigh, Rahman, Jeffries, and Microsoft disclose the method and means thereof as discussed above in reference to claim 13, 45 and 38.

*Response to Arguments*

28. All rejections of claim limitations and assertions of well-known statements, as filed prior to Amendment dated May 30, 2006 not argued in entirety or substantively in response filed as

said Amendment have been conceded by Applicant and the rejections are maintained from henceforth. Any arguments hereinafter related to said rejections of claim limitations or said assertions of well-known statements will be considered untimely.

29. Applicant's arguments filed May 30, 2006 have been fully considered but they are not persuasive.

30. In response to applicant's arguments against the references individually, Examiner submits one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references as the following details, showing the differences of claim 8 over the applied references as requested by Applicant.

31. Haigh discloses an apparatus [fig. 1-3] comprising:

- A master system [sbc 302] including a master memory [e.g., 224] and a storage mechanism [disk 301] for storing a first remote boot image and a second remote boot image [pt.0022—23, 0033-34; disk portions store associated sbc images].
- A first slave system [sbc 303] including a first memory [e.g., 212] and a first programmable interface [bmi 230/320 and associated circuitries/units] coupled to the master system, the first programmable interface including a first system controller [218] [pt.0025, 0034].
- A second slave system [sbc 304] including a second memory [e.g., 212] and a second programmable interface [bmi 320 and associated circuitries/units] coupled to the master system, the second programmable interface including a second system controller [218] [pt.0025, 0034].

- Wherein the master system is configured to perform one or more operations to identify the first slave system and the second slave system after the master system is booted and the first and second slave system controllers are released [218 are released to freely process commands]; wherein the master system is configured to determine that the first remote boot image should be used for the first slave system and to cause the first slave system to retrieve the first remote boot image and to boot from said retrieved first remote boot image; and wherein the master system is configured to determine that the second remote boot image should be used for the second slave system and to cause the second slave system to retrieve the second remote boot image and to boot from said retrieved second remote boot image [0015, 0026, 0029-30, 0033-36; 222 uses the parameters to identify the slaves and partition the disk accordingly to store associated sbc images; OS loader from master system causes slaves to access the appropriate OS].

32. Haigh did not disclose explicitly releasing the system controllers by the master system and did not discuss the details of retrieving the different remote boot images and identifying the slaves.

33. Haisraeli discloses an apparatus [fig.15] wherein first and second system controllers [slaves 302] are released [release\_sync command] by the master system [300] [pt.0307; table 7]. Haisraeli did not disclose some of the details associated with the apparatus as discussed above in reference to Haigh and the other references discussed below.

34. It would have been obvious to one of ordinary skill in the art, having the teachings of Haisraeli and Haigh before him at the time the invention was made, to modify the apparatus taught by Haigh to include the teachings of Hairaeli, as the releasing of slave systems by a

master system is very well known in the art. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to test hierarchical systems such as Haigh's [Haigh: pt.0002, 0283; table 7; testing requires synchronized release between master and slave].

35. Rahman discloses an apparatus [processor system 10] comprising:

- A master system [microprocessor 12(0), maintenance diagnostic chip 14, and other associated circuitries/units such as memory 22] including a storage mechanism [memory 22, memory interface chip 20, and other associated circuitries/units] for storing a remote boot image [fig.1; col.10, ll.17-41].
- Wherein the master system is configured to update a programmable interface to retrieve the remote boot image [col.9, 1.36 – col.10, l.41; mdc 14 updates register 220 in pic 16 to indicate where to retrieve boot image].

36. Rahman did not disclose some of the details associated with the apparatus as discussed in the other references discussed above and below.

37. It would have been obvious to one of ordinary skill in the art, having the teachings of Rahman and Haigh before him at the time the invention was made, to modify the apparatus taught by Haigh to include the system controller taught by Rahman, in order to obtain the apparatus comprising the master system configured to update the first/second programmable interface to cause the first/second slave system to retrieve the first/second remote boot image [parameter of Haigh's 214 can be updated appropriately as is well known in the art]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to reduce overhead and maintenance in a network system [Haigh: pt.0003-0016].

Art Unit: 2116

38. Jeffries discloses a master system [smb master] configured to perform one or more operations [get identity] to identify one or more characteristics [nature, revision] of a slave system [smb slave] after the master system is booted [boot in order to operate], said operations including interrogating the slave system to identify its respective said characteristics [col.7, ll.39-61; col.8, ll.34-47]. Jeffries did not disclose some of the details associated with the apparatus as discussed in the other references discussed above and below.

39. It would have been obvious to one of ordinary skill in the art, having the teachings of Jeffries and Haigh before him at the time the invention was made, to modify the master system taught by Haigh to include the teachings of Jeffries, in order to automatically assign addresses to slaves in a system [Jeffries: col.2, ll.5-22]. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to automatically assign addresses to slaves in a system without requiring the user to manually or programmatically set physical or logical switches.

40. Microsoft discloses determining a boot image [Windows 98] based on one or more characteristics [486dx] [pg.23, Before You Begin]. Microsoft did not disclose some of the details associated with the apparatus as discussed in the other references discussed above.

41. It would have been obvious to one of ordinary skill in the art, having the teachings of Microsoft, Jeffries and Haigh before him at the time the invention was made, to modify the master system taught by Haigh and Jeffries to include the teachings of Microsoft, in order to obtain the apparatus comprising the master system configured to determine that the first/second remote image should be used for the first/second slave system in response to the interrogation of the first/second slave system based on the identified characteristics of the first/second slave

system. One of ordinary skill in the art would have been motivated to make such a combination as it provides a very well known way to conform with minimum system requirements and ensure that a system can operate effectively [Microsoft: pg.23, Before You Begin].

42. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. In the instant case, Examiner respectfully submits that the knowledge including motivation for combining can be found at least in the cited references without any gleanings from Applicant's disclosure.

43. Applicant traverses the taking of Official Notice of translation in claim 37. In response, Examiner submits Bair et al., US Patent 5577050, as disclosing the very well known feature of address translation [col.2, 1.53 – col.3, 1.20] that can be incorporated into the apparatus of Haigh by one with ordinary skill in the art [address location is modified from the original to the redundancy].

44. As such, Applicant's arguments are deemed not persuasive and the rejections are respectfully maintained.

*Conclusion*

45. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tse Chen  
June 7, 2006

*James Tresillo*  
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PATENT EXAMINER  
TC 2100